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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,679	11/08/2005	Klaus Geiger	125352	8338
25944	7590	04/05/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER FAULK, DEVONA E	
			ART UNIT 2615	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/550,679		GEIGER ET AL.	
	Examiner		Art Unit	
	Devona E. Faulk		2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/26/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 recites " wherein the response quantity is vibration velocity Q through the orifice". The specification discloses, on page 9, lines 4-9, that vibration sensors may be used to sense structural vibrations resulting from the sound generated by the simulator and that the transfer impedance is then typically between structural vibration velocity and acoustic volume velocity. The specification does not disclose vibration acceleration. Acceleration is the rate of change of velocity. Furthermore this does not disclose that the response quantity is vibration velocity.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (hereafter AAPA) (page 1, 27-page 3, line 10) in view of Kunugi et al. (US 4,739,513).

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Regarding claim 1, AAPA discloses a method of determining the acoustical transfer impedance $Z_{sub.t}$ between a first position and a listening position of a human being (page 2),

the method comprising generating an acoustical volume velocity Q in the listening position (page 2, lines 5-27),

measuring a response quantity p at the first position resulting from the volume velocity Q (page 2, lines 5-27), and

determining the acoustical transfer impedance $Z_{sub.t}$ as the response quantity p divided by the acoustical volume velocity Q , $Z_{sub.t}=p/Q$ (page 2, lines 5-27),

characterized in that the acoustical volume velocity Q is generated using a simulator (implicit) simulating acoustic properties of at least a head of a human being.

AAPA discloses outputting the acoustical volume velocity Q through the orifice (page 2, lines 5-27).

AAPA fails to explicitly disclose that the simulator comprising a simulated human ear (14, 15) with an orifice in the simulated head and a sound source (30) in the simulator.

Kunugi discloses a simulator (A, Figure 19) including a simulated human ear (dummy mannequin 5-12, Figure 19) and a sound source (11L and 11R, Figure 19; column 11, lines 39-67) in the simulator.

It would have been obvious to modify AAPA so that the simulator includes a simulated ear and a sound source in the simulator as taught by Kunugi so that the listener can have the perception of completely natural sound.

Regarding claims 2 and 7, AAPA as modified by Kunugi discloses wherein the simulator simulates the head and a torso of a human being (AAPA, page 1, lines 29-31; Kunugi dummy mannequin; column 7, lines 9-15; column 11, lines 49-52). All elements of claim 2 are comprehended by the rejection of claim 1.

Regarding claim 3, AAPA as modified by Kunugi discloses wherein the simulator comprises a sound source in the interior of the simulator and a pair of microphones arranged to measure a pair of sound pressures in a canal leading from the sound source to the orifice, and that the method further comprises determining the volume velocity Q based on the pair of sound pressures. All elements of claim 3 are comprehended by the rejection of claim 1.

Regarding claim 4, AAPA as modified by Kunugi discloses wherein the response quantity is sound pressure. All elements of claim 4 are comprehended by the rejection of claim 3.

Regarding claims 6, 12-14, AAPA as modified by Kunugi discloses a simulator for use with the method according to claim 1 and simulating acoustic properties of at least a head of a human being, the simulator comprising a simulated human ear with an orifice in the simulated head and a sound source (30) in the simulator for outputting the

acoustical volume velocity Q through the orifice. All elements of claim 6 are comprehended by the rejection of claim 1.

Regarding claim 8, AAPA as modified by Kunugi discloses wherein the simulator comprises two orifices simulating a left ear (14) and right ear (15) respectively of the simulated human being. All elements of claim 6 are comprehended by the rejection of claim 6.

Regarding claim 9, AAPA as modified by Kunugi discloses wherein means (1) are provided for selectively outputting sound signals through the simulated left ear or through the simulated right ear (Kunugi, Figure 8, switch 5-3). All elements of claim 9 are comprehended by the rejection of claim 8.

Regarding claim 10, AAPA as modified by Kunugi discloses wherein the simulator comprises means for measuring the sound output from the simulated ears. All elements of claim 10 are comprehended by the rejection of claim 6.

Regarding claim 11, AAPA as modified by Kunugi discloses wherein the means for measuring the sound output from the simulated ears comprises a pair of microphones for measuring the output sound volume velocity. All elements of claim 11 are comprehended by the rejection of claim 10.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848.

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2615. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DEF



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